Innovation & Design Programme
Faculty of Engineering

Bachelor of Engineering (Engineering Science)
with Second Major in Innovation & Design

Cohort 2016/2017

Modular Requirements	Modular Credits (MCs)
University Level Requirements	
General education modules:	
• Quantitative Reasoning (GER1000)	4
• Thinking & Expression (GET)	4
• Human Cultures (GEH)	4
• Singapore Studies (GES)	4
• Asking Questions (GEQ1000)	4
Sub-total for University Level Requirements	**20**
Programme Requirements	
Faculty requirements:	
• ES1531 Critical Thinking & Writing [1] (or equivalent) *(Double-counted for Second Major in Innovation & Design)*	4
• ES2331 Communicating Engineering [1]	4
• EG2401 Engineering Professionalism	3
• ES1xxxx English [2]	-
Year 1 and core modules:	
• MA1507 Advanced Calculus	4
• MA1508 Linear Algebra with Applications	4
• MA2501 Differential Equations & Systems	4
• CM1502 General & Physical Chemistry for Engineers	4
• LSM1401 Fundamental of Biochemistry	4
• ESP1104 Introduction to Electronic Systems	4
• ESP1107 Computing & Statistics	4
• PC1433 Mechanics & Waves	4
• PC2130B Applied Quantum Physics	4
• PC2133 Applied Solid State Physics	4
• PC2230 Thermodynamics & Statistical Mechanics	4
• ESP2106 Principles of Continua	4
• EE2011 Engineering Electromagnetics	4
ESP technical electives (specialisations) [3]	32
ESP design and project modules:	
• ESP2109 Design Project 1	4
• ESP2110 Design Project 2	4
• EG4301 DCP Dissertation or EG4301A Ideas to Start-up (over 2 consecutive semesters) *(Double-counted for Second Major in Innovation & Design and replaces ESP4901 Research Project)*	12
EG3612 Vacation Internship Programme (VIP) [4]	6
Sub-total for Programme Requirements	**121**
Unrestricted Elective Modules (UEM)	
• Group A module for Second Major	4
• Group B module for Second Major	4
• Group C modules for Second Major – Innovation & Enterprise electives	12
• EG3301R DCP Project [3] (over 2 consecutive semesters) *(replaces ESP3902 Major Design Project I and ESP3903 Major Design Project II)*	12
Sub-total for Unrestricted Elective Modules	**32**
Total	**173**

(updated 12 June 2018)

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Notes:

1   Students in USP, UTRP, and RVRC may read an equivalent module (e.g. ES1501X Academic Expository Writing) in lieu of EG1531 and/or ES2331.

2   Students who have not passed or been exempted from the Qualifying English Test at the point of admission will have to read ES1000 and/or ES1103. ES1103 carries 4 MCs which may be counted as UEM.

3   Students in this Second Major are allowed to complete additional technical electives (8 MCs) in lieu of ESP3902 (4 MCs) and ESP3903 (4 MCs).

4   EG3612 is optional for poly-intake students and those in the following special programmes: double degree programmes (DDP), concurrent degree programmes (CDP), Chemical Sciences Programme (CSP), and Global Engineering Programme (GEP).

(updated 12 June 2018)